

Enhanced Surveillance for Antimicrobial Resistance Among Enteric Bacteria: NARMS Retail Food Study

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Background: The food supply, including meat and poultry, is an important source of enteric bacteria, including *Campylobacter*, *E. coli*, *Salmonella* and possibly enterococci. Antimicrobial resistance among these foodborne bacteria is not uncommon and often is associated with the use of antimicrobial agents in food animals. Retail food represents the point of exposure that is closest to the consumer and, when combined with data from slaughter plants and on-farm studies, provides a more representative picture of the prevalence of resistance in foodborne pathogens. To focus efforts to mitigate antimicrobial resistance and to better understand the contribution of the food supply to antimicrobial resistance among enteric bacteria, the National Antimicrobial Resistance Monitoring System (NARMS) for Enteric Bacteria is extending surveillance of antimicrobial resistance to bacteria isolated from food.

Program Description: The NARMS Retail Food Study is a collaborative effort between CDC, five FoodNet sites (Connecticut, Georgia, Maryland, Minnesota and Tennessee) and the U.S. Food and Drug Administration (FDA). The NARMS Retail Food Study has adopted a standard method to monitor the prevalence of antimicrobial resistance among *Campylobacter*, *E. coli*, *Salmonella* and enterococci isolated from a convenience sample of meat and poultry from selected grocery stores in the United States. Data collection will begin January 1, 2002. Each site will visit at least one grocery store per month, not returning to the same store for at least two months, and purchase packages of meat or poultry including 10 packages of chicken breasts, 10 packages of pork chops, 10 packages of ground turkey and 10 packages of ground beef. Isolation procedures have been adapted from the FDA's Bacteriological Analytical Manual. Each site will culture the rinse from each sample for the presence of *Salmonella* and *Campylobacter*. In addition, Georgia, Maryland and Tennessee will culture the rinse for *E. coli* and enterococci. Isolates will be forwarded to FDA for antimicrobial susceptibility testing.

Conclusion: This collaborative surveillance project will provide data and isolates useful for focusing efforts to mitigate antimicrobial resistance in enteric bacteria. Enhanced efforts are needed to mitigate the increasing prevalence of antimicrobial resistance among foodborne bacteria. By examining the prevalence of antimicrobial-resistant enteric bacteria we will better understand the extent of antimicrobial resistance in the food supply and will be better equipped to implement mitigation strategies.

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